

Special Containers

The U.S. Department of Energy designed and tested an elaborate system for safely shipping transuranic radioactive waste to the Waste Isolation Pilot Plant, (WIPP).

The container, called Transuranic Packaging Transporter Model 2, or TRUPACT-II, is:

- Eight feet in diameter and 10 feet high.
- Double-contained, non-vented, and constructed of stainless steel.
- Certified by the Nuclear Regulatory Commission and meets U.S. Department of Transportation safety requirements.

A series of stringent tests conducted on the container included:

- A drop from a height of 30 feet onto an unyielding surface.
- Exposure to jet fuel fire at a temperature of 1,475 degrees Fahrenheit for a minimum of 30 minutes.
- A drop onto a steel spike from 40 inches to test puncture resistance.

The tests showed that the container would hold its seal and prevent release of radioactivity to the atmosphere.

Tractor-Trailer Carriers

Conventional diesel tractors will pull trailers that are designed to transport as many as three TRUPACT-II containers. Features of these carriers include:

- A computer keyboard linking the vehicle with a satellite tracking system.
- Continuous tracking by a central monitoring room at the WIPP site.
- Satellite telephones to allow direct two-way communication, with cellular telephones for backup.

Any WIPP carrier contractor must comply with all U.S. Department of Transportation requirements for

transporting radioactive materials. Drivers pass stringent traffic safety and emergency response examinations, maintain good driving records, and renew their certification each year. Training for drivers includes a TRUPACT-II recovery procedure in the event a TRUPACT-II container becomes separated from the trailer in an incident.

Other assurances of a safe transportation system include the following:

- Replacing tractors at three-year or 300,000-mile intervals.
- Designation of safe parking areas along all routes for use in bad weather.
- Ability to replace or repair tractors, en route, within eight hours.

Shipping Routes

The U.S. Department of Transportation regulations require radioactive materials to be shipped on the interstate highway system as much as possible unless states designate other routes. New Mexico has designated specific state routes.



U.S. Department of Energy Carlsbad Field Office The Waste Isolation Pilot Plant For more information:

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